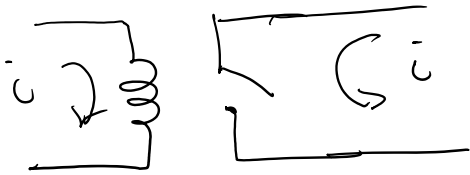


Lecture 1 - Introduction

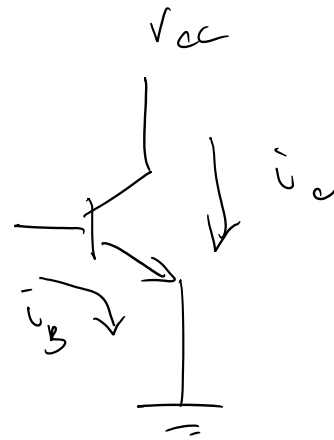
Tuesday, January 21, 2020 8:26 AM

Objectives: - Discuss the course content and administrative details
- Begin the technology evolution discussion

SWITCHING

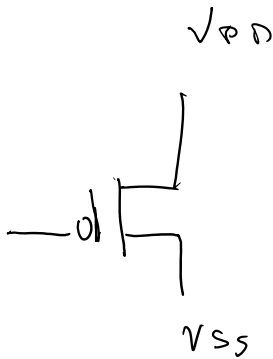


CURRENT
CONTROLLED
SWITCH
(CURRENT)



CURRENT CONTROLLED
CURRENT SWITCH

CUTOFF
LINEAR
SATURATION



MOSFET
VOLTAGE CONTROLLED
CURRENT SWITCH

SAME
MODES

Bipolar Transistor Technologies: Fast but consume a lot of power
MOS Transistor Technologies: In early years, the components were slow but consumed little power and had good noise margins. Later CMOS technologies were fast. Power consumption increases with switching speed.